

WHAT IS CLAIMED IS:

- 1 1. An access device comprising:  
2 a timeslot allocation table including timeslot allocation information; and  
3 a transmitter coupled to the timeslot allocation table, wherein the transmitter transmits  
4 data and updated timeslot allocation information in accordance with the timeslot allocation  
5 information.
- 1 2. The access device according to claim 1, further comprising at least one input channel,  
2 wherein the transmitter further allocates timeslot lengths for the at least one input channel  
3 according to the timeslot allocation information.
- 1 3. The access device according to claim 2, wherein the timeslot allocation table receives  
2 updated timeslot allocation information and the transmitter reallocates timeslot lengths according  
3 to the updated timeslot allocation information.
- 1 4. The access device according to claim 2, wherein the timeslot allocation table further  
2 includes timeslot allocation information for each of the at least one input channel.
- 1 5. The access device according to claim 1 further comprising at least one input channel,  
2 wherein the transmitter includes a time division multiplexer and wherein the time division  
3 multiplexer time division multiplexes data from the at least one input channel into timeslots  
4 according to the timeslot allocation information.
- 1 6. The access device according to claim 5, wherein the timeslot allocation information  
2 includes the number of clock cycles allocated to each of the at least one input channel, and the  
3 channel characteristics associated to each of the at least one input channel.

1 7. The access device according to claim 1, wherein the transmitter transmits updated  
2 timeslot allocation information in a reserved slot along with the transmitted data.

1 8. The access device according to claim 1, further comprising:  
2 a second timeslot allocation table including second timeslot allocation information; and  
3 a receiver coupled to the second timeslot allocation table and coupled to the transmitter.

1 9. The access device according to claim 1, further comprising a controller coupled to the  
2 timeslot allocation table, wherein the controller receives updated timeslot allocation information  
3 and updates the timeslot allocation table with the updated timeslot allocation information.

1 10. The access device according to claim 9, wherein the updated timeslot allocation  
2 information includes information regarding the addition of channels.

1 11. The access device according to claim 9, wherein the updated timeslot allocation  
2 information includes information regarding the removal of channels.

1 12. The access device according to claim 1, wherein the timeslot allocation table includes  
2 characteristics of at least one channel recorded into a corresponding channel section of the  
3 timeslot allocation table.

1 13. The access device according to claim 12, wherein the characteristics of the at least one  
2 channel include at least one of data type information, time stamp information, priority  
3 information, and sequence information.

1 14. The access device according to claim 12, wherein the characteristics of the at least one  
2 channel include inter-channel relationship information used to combine multiple non-adjacent  
3 timeslots into one virtual timeslot.

1 15. The access device according to claim 1, wherein the transmitter further transmits time  
2 division multiplexed data and packetized data simultaneously without disrupting the flow of the  
3 corresponding data.

1 16. A method of controlling access to a network comprising:  
2 reserving a portion of transmitted data for timeslot allocation information of at least one  
3 channel; and  
4 storing the timeslot allocation information in a timeslot allocation table.

1 17. The method according to claim 16, further comprising time division multiplexing the  
2 timeslot allocation information with the transmitted data.

1 18. The method according to claim 16, further comprising updating the timeslot allocation  
2 information with updated timeslot allocation information to reallocate a timeslot for the at least  
3 one channel.

1 19. The method according to claim 18, wherein the updated timeslot allocation information  
2 includes information regarding the addition of a second channel to the at least one channel.

1 20. The method according to claim 18, wherein the updated timeslot allocation information  
2 includes information regarding the subtraction of a second channel from the at least one channel.

1 21. The method according to claim 18, wherein the updated timeslot allocation information  
2 includes information regarding increasing the length of a timeslot allocated to the at least one  
3 channel.

1 22. The method according to claim 18, wherein the updated timeslot allocation information  
2 includes information regarding decreasing the length of a timeslot allocated to the at least one  
3 channel.

1 23. The method according to claim 16, further comprising receiving received data including  
2 updated timeslot allocation information time division multiplexed with the received data.

1 24. The method according to claim 16, wherein the timeslot allocation table includes  
2 characteristics of at least one channel recorded into a corresponding channel section of the  
3 timeslot allocation table.

1 25. The method according to claim 24, wherein the characteristics of the at least one channel  
2 include at least one of data type information, time stamp information, priority information, and  
3 sequence information.

1 26. The method according to claim 24, wherein the characteristics of the at least one channel  
2 include inter-channel relationship information used to combine multiple non-adjacent timeslots  
3 into one virtual timeslot.

1 27. The method according to claim 16, further comprising transmitting time division  
2 multiplexed data and packetized data simultaneously without disrupting the flow of the  
3 corresponding data.

1 28. An access device comprising:  
2 means for allocating a portion of a bandwidth for timeslot allocation information; and  
3 a transmitter for transmitting updated timeslot allocation information in the portion of the  
4 bandwidth allocated for the timeslot allocation information.